

2018-03399

Feature activity 06

```
C:\Users\Clynt\Documents\GitHub\ME8_Containerization_and_Docker\5-volumes>docker run --rm -d --name dummy ctguy18/ping
f032588dc87da8c2eb0e2243050fc2b56761d10ba2da0d5cdbcfcfa170b45b218
```

Starting the first ping container and checking if the network has it in Containers{}

```
C:\Users\Clynt\Documents\GitHub\ME8_Containerization_and_Docker\5-volumes>docker network inspect bridge
[
  {
    "Name": "bridge",
    "Id": "419d91f42e26fd4fbb3d786df1b617d10ad67a99b593e01c2b2efaed9ba40284",
    "Created": "2021-06-01T22:37:22.2027677Z",
    "Scope": "local",
    "Driver": "bridge",
    "EnableIPv6": false,
    "IPAM": {
      "Driver": "default",
      "Options": null,
      "Config": [
        {
          "Subnet": "172.17.0.0/16",
          "Gateway": "172.17.0.1"
        }
      ]
    },
    "Internal": false,
    "Attachable": false,
    "Ingress": false,
    "ConfigFrom": {
      "Network": ""
    },
    "ConfigOnly": false,
    "Containers": {
      "f032588dc87da8c2eb0e2243050fc2b56761d10ba2da0d5cdbcfcfa170b45b218": {
        "Name": "dummy",
        "EndpointID": "d8fff5cddb7e12bfdb03d69bc79852e33ebb8de4b9df607229d35a2d7610f54",
        "MacAddress": "02:42:ac:11:00:02",
        "IPv4Address": "172.17.0.2/16",
        "IPv6Address": ""
      }
    },
    "Options": {
      "com.docker.network.bridge.default_bridge": "true",
      "com.docker.network.bridge.enable_icc": "true",
      "com.docker.network.bridge.enable_ip_masquerade": "true",
      "com.docker.network.bridge.host_binding_ipv4": "0.0.0.0",
      "com.docker.network.bridge.name": "docker0",
      "com.docker.network.driver.mtu": "1500"
    },
    "Labels": {}
  }
]
```

Starting second ping container

```
C:\Users\Clynt\Documents\GitHub\ME8_Containerization_and_Docker\5-volumes>docker run --rm -d -e PING_TARGET=172.17.0.2 --name pinger ctguy18/ping
964105e0c2f5fe3b9fa1f8e9102ff48301dab0d05a599d955797ef1d4081e84e
```

```
C:\Users\Clynt\Documents\GitHub\ME8_Containerization_and_Docker\5-volumes>docker ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
964105e0c2f5	ctguy18/ping	"sh -c 'ping \$PING_T..."	36 seconds ago	Up 36 seconds		pinger
f032588dc87d	ctguy18/ping	"sh -c 'ping \$PING_T..."	3 minutes ago	Up 3 minutes		dummy

```
C:\Users\Clynt\Documents\GitHub\ME8_Containerization_and_Docker\5-volumes>docker logs pinger
```

```
PING 172.17.0.2 (172.17.0.2) 56(84) bytes of data.  
64 bytes from 172.17.0.2: icmp_seq=1 ttl=64 time=0.058 ms  
64 bytes from 172.17.0.2: icmp_seq=2 ttl=64 time=0.074 ms  
64 bytes from 172.17.0.2: icmp_seq=3 ttl=64 time=0.042 ms  
64 bytes from 172.17.0.2: icmp_seq=4 ttl=64 time=0.040 ms  
64 bytes from 172.17.0.2: icmp_seq=5 ttl=64 time=0.040 ms  
64 bytes from 172.17.0.2: icmp_seq=6 ttl=64 time=0.040 ms  
64 bytes from 172.17.0.2: icmp_seq=7 ttl=64 time=0.040 ms  
64 bytes from 172.17.0.2: icmp_seq=8 ttl=64 time=0.044 ms  
64 bytes from 172.17.0.2: icmp_seq=9 ttl=64 time=0.063 ms  
64 bytes from 172.17.0.2: icmp_seq=10 ttl=64 time=0.042 ms  
64 bytes from 172.17.0.2: icmp_seq=11 ttl=64 time=0.040 ms  
64 bytes from 172.17.0.2: icmp_seq=12 ttl=64 time=0.062 ms  
64 bytes from 172.17.0.2: icmp_seq=13 ttl=64 time=0.039 ms  
64 bytes from 172.17.0.2: icmp_seq=14 ttl=64 time=0.042 ms  
64 bytes from 172.17.0.2: icmp_seq=15 ttl=64 time=0.040 ms  
64 bytes from 172.17.0.2: icmp_seq=16 ttl=64 time=0.049 ms  
64 bytes from 172.17.0.2: icmp_seq=17 ttl=64 time=0.040 ms  
64 bytes from 172.17.0.2: icmp_seq=18 ttl=64 time=0.048 ms  
64 bytes from 172.17.0.2: icmp_seq=19 ttl=64 time=0.056 ms  
64 bytes from 172.17.0.2: icmp_seq=20 ttl=64 time=0.040 ms  
64 bytes from 172.17.0.2: icmp_seq=21 ttl=64 time=0.052 ms  
64 bytes from 172.17.0.2: icmp_seq=22 ttl=64 time=0.040 ms  
64 bytes from 172.17.0.2: icmp_seq=23 ttl=64 time=0.041 ms  
64 bytes from 172.17.0.2: icmp_seq=24 ttl=64 time=0.040 ms  
64 bytes from 172.17.0.2: icmp_seq=25 ttl=64 time=0.040 ms
```

```
C:\Users\Clynt\Documents\GitHub\ME8_Containerization_and_Docker\5-volumes>docker network create skynet
4fba45140869a133973567b2c8852eb9f1b4e617abfb15cfaf4f0538d0eeb998
```

```
C:\Users\Clynt\Documents\GitHub\ME8_Containerization_and_Docker\5-volumes>docker network ls
```

NETWORK ID	NAME	DRIVER	SCOPE
419d91f42e26	bridge	bridge	local
439637123e42	host	host	local
b0bc6bfbaea7	none	null	local
4fba45140869	skynet	bridge	local

```
C:\Users\Clynt\Documents\GitHub\ME8_Containerization_and_Docker\5-volumes>docker network inspect skynet
```

```
[
  {
    "Name": "skynet",
    "Id": "4fba45140869a133973567b2c8852eb9f1b4e617abfb15cfaf4f0538d0eeb998",
    "Created": "2021-06-02T00:16:22.6564307Z",
    "Scope": "local",
    "Driver": "bridge",
    "EnableIPv6": false,
    "IPAM": {
      "Driver": "default",
      "Options": {},
      "Config": [
        {
          "Subnet": "172.18.0.0/16",
          "Gateway": "172.18.0.1"
        }
      ]
    },
    "Internal": false,
    "Attachable": false,
    "Ingress": false,
    "ConfigFrom": {
      "Network": ""
    },
    "ConfigOnly": false,
    "Containers": {},
    "Options": {},
    "Labels": {}
  }
]
```

```
C:\Users\Clynt\Documents\GitHub\ME8_Containerization_and_Docker\5-volumes>docker run --rm -d --network skynet --name dummy ctguy18/ping
c4f25385ddece3b90e96078d14cde6b04a395a8577a4fdcd6ccfd7339d54f0f8
```

```
C:\Users\Clynt\Documents\GitHub\ME8_Containerization_and_Docker\5-volumes>docker run --rm -d --network skynet -e PING_TARGET=dummy --name pinger ctguy18/ping
fee5e6ce4e7572dfe2bd8de41aab0ab5c0415a60e80fe2f2a903ff4516fe53bd
```

```
C:\Users\Clynt\Documents\GitHub\ME8_Containerization_and_Docker\5-volumes>docker logs pinger
```

```
PING dummy (172.18.0.2) 56(84) bytes of data.
64 bytes from dummy.skynet (172.18.0.2): icmp_seq=1 ttl=64 time=0.088 ms
64 bytes from dummy.skynet (172.18.0.2): icmp_seq=2 ttl=64 time=0.059 ms
64 bytes from dummy.skynet (172.18.0.2): icmp_seq=3 ttl=64 time=0.078 ms
64 bytes from dummy.skynet (172.18.0.2): icmp_seq=4 ttl=64 time=0.062 ms
64 bytes from dummy.skynet (172.18.0.2): icmp_seq=5 ttl=64 time=0.045 ms
64 bytes from dummy.skynet (172.18.0.2): icmp_seq=6 ttl=64 time=0.061 ms
64 bytes from dummy.skynet (172.18.0.2): icmp_seq=7 ttl=64 time=0.048 ms
64 bytes from dummy.skynet (172.18.0.2): icmp_seq=8 ttl=64 time=0.061 ms
64 bytes from dummy.skynet (172.18.0.2): icmp_seq=9 ttl=64 time=0.068 ms
```

Connecting between containers in a network:

```
C:\Users\Clynt\Documents\GitHub\ME8_Containerization_and_Docker\5-volumes>docker run --rm -d --name widgetdb --network skynet -e POSTGRES_PASSWORD=password -p 5432 postgres cc426a33e00c88313d205c357110ab0934fd9d81c062f75db7d7876fca845700
```

```
C:\Users\Clynt\Documents\GitHub\ME8_Containerization_and_Docker\5-volumes>docker run --rm -d --name gadgetdb --network skynet -e POSTGRES_PASSWORD=password -p 5432 postgres 01ccf2215412bf97152a915e5f2819b87e4f05dc27ba13a9c987081eab700613
```

```
C:\Users\Clynt\Documents\GitHub\ME8_Containerization_and_Docker\5-volumes>docker ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
01ccf2215412	postgres	"docker-entrypoint.s..."	3 seconds ago	Up 3 seconds	0.0.0.0:53591->5432/tcp	gadgetdb
cc426a33e00c	postgres	"docker-entrypoint.s..."	26 seconds ago	Up 25 seconds	0.0.0.0:53588->5432/tcp	widgetdb

```
C:\Users\Clynt\Documents\GitHub\ME8_Containerization_and_Docker\5-volumes>docker exec -it widgetdb /bin/bash
root@cc426a33e00c:/# psql -U postgres
psql (13.3 (Debian 13.3-1.pgdg100+1))
Type "help" for help.
```

```
postgres=# \q
root@cc426a33e00c:/# psql -U postgres -h gadgetdb
Password for user postgres:
psql (13.3 (Debian 13.3-1.pgdg100+1))
Type "help" for help.
```

```
postgres=# \q
root@cc426a33e00c:/# exit
exit
```

```
C:\Users\Clynt\Documents\GitHub\ME8_Containerization_and_Docker\5-volumes>docker stop widgetdb gadgetdb
widgetdb
gadgetdb
```

```
C:\Users\Clynt\Documents\GitHub\ME8_Containerization_and_Docker\5-volumes>docker run --rm -d --name widgetdb --network skynet -e POSTGRES_PASSWORD=password -p 5432:5432 postgres a8330d5d396934f9edab03a5cd8766299d3d866ee355787ae4785587dea3c849
```

```
C:\Users\Clynt\Documents\GitHub\ME8_Containerization_and_Docker\5-volumes>docker exec -it widgetdb /bin/bash
root@a8330d5d3969:/# psql -U postgres -h localhost
psql (13.3 (Debian 13.3-1.pgdg100+1))
Type "help" for help.
```

```
postgres=# \q
root@a8330d5d3969:/# exit
exit
```

```
C:\Users\Clynt\Documents\GitHub\ME8_Containerization_and_Docker\5-volumes>docker stop widgetdb
widgetdb
```